

MEMORANDUM

TO	Dawn MacNeil, STPA	FILE NO.	S-1332-09
FROM	Dianne Theriault	SHIFT:	0630 to 1830
TEL	(902) 539-3012	CC:	Shawn Bernon, STPA
FAX	(902) 539-3381		Wilfred Kaiser, STPA
DATE	12 th June, 2009		Terry Smith, ALL-TECH
		STPA NO.	COCW-0052

**SUBJECT: 11th June, 2009 Real-time Air Monitoring Results
Sydney Tar Ponds Agency – Vertical Cut-off Walls
FINAL REPORT**

Attached is a summary of Real-time particulate (as PM₁₀) results for air monitoring performed on the 11th of June, 2009. Nigel MacLean and Dave Reeves of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH) performed all air monitoring activities.

Weather conditions on the day of sampling:

- Mainly cloudy
- Temperature: approximately 11°C
- Wind Direction: Southeast

Comments: *ALL-TECH was on-Site at 0630 hours and sampling began as soon as there was site activity. Air monitoring was performed during AECOM's construction activities.*

All downwind and upwind measurements of PM₁₀ were below the established Site Action Level for this parameter of 155 µg/m³.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 0.66 ppm. Each measurement is the average of a 15 minute sample. A minimum of 2 samples were taken downwind and 1 sample upwind every hour. All measurements were found to be below the detection limit of the instrument. Levels above detection limit will be noted in the table below.

Due to operational criteria, during periods of precipitation (snow and rain) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Dave Reeves and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



Dianne Theriault, B.Tech
Environmental Technologist
ALL-TECH Environmental Services Cape Breton Ltd.

Copied via e-mail:

Shawn Bernon shawn@tarpondscleanup.ca, Wilfred Kaiser wilfred@tarpondscleanup.ca, Nancy LeDrew nancy@tarpondscleanup.ca, Trish Magliaro trish@tarpondscleanup.ca, Terry Smith tsmith@toalltech.com, Phyllis Low pilow@toalltech.com, Dianne Theriault dtheriault@toalltech.com, Darren Gardiner dgardiner@croworld.com, Darren Lawless dlawless@toalltech.com, Kevin Mac Pherson kevinmacp@cbcl.ca, Kathy Harquail kharquail@toalltech.com

Real-time Airborne PM₁₀ Concentration Results
Sydney Tar Ponds Agency – Vertical Cut-off Walls
11th June, 2009

Sample No. & Air Monitoring Location	Time of Day	PM₁₀ Action Level (µg/m³)	Average Result (µg/m³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 250m East of Salvation Army (N46°08.908') (W060°10.739')	0700	155	5	Southeast	Upwind	Background	No observations seen to affect sampling integrity
2 170m North of Cape Breton St. and Victoria Rd. intersection (N46°08.918') (W060°10.745')	0700	155	20	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
3 170m North of Cape Breton St. and Victoria Rd. intersection (N46°08.918') (W060°10.745')	0725	155	25	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
4 250m East of Salvation Army (N46°08.908') (W060°10.739')	0800	155	8	Southeast	Upwind	Background	No observations seen to affect sampling integrity
5 170m North of Cape Breton St. and Victoria Rd. intersection (N46°08.918') (W060°10.745')	0800	155	16	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
6 170m North of Cape Breton St. and Victoria Rd. intersection (N46°08.918') (W060°10.745')	0820	155	26	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
7 250m East of Salvation Army (N46°08.908') (W060°10.739')	0900	155	10	Southeast	Upwind	Background	No observations seen to affect sampling integrity
8 170m North of Cape Breton St. and Victoria Rd. intersection (N46°08.918') (W060°10.745')	0900	155	39	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
9 170m North of Cape Breton St. and Victoria Rd. intersection (N46°08.918') (W060°10.745')	0930	155	27	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
10 250m East of Salvation Army (N46°08.908') (W060°10.739')	1000	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
11 170m North of Cape Breton St. and Victoria Rd. intersection (N46°08.918') (W060°10.745')	1000	155	21	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
12 170m North of Cape Breton St. and Victoria Rd. intersection (N46°08.918') (W060°10.745')	1035	155	34	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
13 250m East of Salvation Army (N46°08.908') (W060°10.739')	1100	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
14 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1100	155	13	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
15 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1135	155	7	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
16 250m East of Salvation Army (N46°08.908') (W060°10.739')	1200	155	9	Southeast	Upwind	Background	No observations seen to affect sampling integrity
17 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1200	155	8	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
18 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1220	155	9	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
19 250m East of Salvation Army (N46°08.908') (W060°10.739')	1300	155	6	Southeast	Upwind	Background	No observations seen to affect sampling integrity
20 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1300	155	7	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity
21 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1340	155	9	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
22 250m East of Salvation Army (N46°08.908') (W060°10.739')	1400	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
23 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1400	155	9	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
24 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1415	155	9	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
25 250m East of Salvation Army (N46°08.908') (W060°10.739')	1500	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
26 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1500	155	7	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
27 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1530	155	9	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
28 250m East of Salvation Army (N46°08.908') (W060°10.739')	1600	155	7	Southeast	Upwind	Background	No observations seen to affect sampling integrity
29 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1600	155	8	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM ₁₀ Action Level (µg/m ³)	Average Result (µg/m ³)	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
30 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1620	155	7	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
31 250m East of Salvation Army (N46°08.908') (W060°10.739')	1700	155	8	Southeast	Upwind	Background	No observations seen to affect sampling integrity
32 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1700	155	8	Southeast	Downwind	Excavators and dump trucks operating	No observations seen to affect sampling integrity
33 100m East of Spar Rd. and Ferry St. intersection (N46°09.059') (W060°10.838')	1745	155	7	Southeast	Downwind	No activity observed on site	No observations seen to affect sampling integrity

Notes: Air sample duration for each monitoring event was 15 minutes.

Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ($\mu\text{g}/\text{m}^3$)	Dust Budget Exceedance Value ($\mu\text{g}/\text{m}^3$)
170m North of Cape Breton St. and Victoria Rd. intersection	0700 to 0759	23	990
170m North of Cape Breton St. and Victoria Rd. intersection	0800 to 0859	44	990
170m North of Cape Breton St. and Victoria Rd. intersection	0900 to 0959	77	990
170m North of Cape Breton St. and Victoria Rd. intersection	1000 to 1059	105	990
100m East of Spar Rd. and Ferry St. intersection	1100 to 1159	115	990
100m East of Spar Rd. and Ferry St. intersection	1200 to 1259	124	990
100m East of Spar Rd. and Ferry St. intersection	1300 to 1359	132	990
100m East of Spar Rd. and Ferry St. intersection	1400 to 1459	141	990
100m East of Spar Rd. and Ferry St. intersection	1500 to 1559	149	990
100m East of Spar Rd. and Ferry St. intersection	1600 to 1659	157	990
100m East of Spar Rd. and Ferry St. intersection	1700 to 1759	165	990

VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Observed		•
P.I.D. Required	•	